



## Safety Data Sheet

according to 1907/2006/EC, Article 31, amended by  
Regulation (EU) No. 453/2010

### PRESERVATIVE 12

Date: 01/05/2020

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product Identifier

**Trade Name:** Preservative 12/Plantaserve E

**INCI:** Phenoxyethanol, Ethylhexylglycerin

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Use of the Substance/Mixture:** Preservative for cosmetics & toiletries.

### 1.3 Details of the supplier of the safety data sheet

Naturally Balmy Ltd

8 Benson Road

Nuffield Industrial Estate

Poole

BH17 0GB

Email: [sales@naturallybalmy.co.uk](mailto:sales@naturallybalmy.co.uk)

### 1.4 Emergency telephone number

Health and Safety Executive (HSE) Chemicals Regulation Directorate

5S.1 Redgrave Court, Merton Road, Bootle, Merseyside. L20 7HS

Telephone: +44 151 951 3317

Email: [biocidesenquiries@hse.gsi.gov.uk](mailto:biocidesenquiries@hse.gsi.gov.uk)

REACH and CLP UK CA Help Desk, Health and Safety Executive

2.3 Redgrave Court, Merton Road, L20 7HS Bootle, Merseyside

Email: [ukreachca@hse.gsi.gov.uk](mailto:ukreachca@hse.gsi.gov.uk)

## 2. Hazards Identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Serious eye damage, Category 1 H318: Causes serious eye damage.

## 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:



**Signal word:** Danger.

**Hazards statements:** H318 Causes serious eye damage.

**Precautionary statements:**

P280 Wear eye protection/ face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

**Hazardous components which must be listed on the label:**

70445-33-9 3-(2-ethylhexyloxy)propane-1,2-diol

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

# 3. Composition/Information on ingredients

## 3.1 Substances

## 3.2 Mixtures

**Chemical nature:** Solution.

**Hazardous components**

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration [% w/w]
2-Phenoxyethanol	122-99-6 204-589-7 603-098-00-9 01-2119488943-21-XXXX	Acute Tox. 4; H302 Eye Irrit. 2; H319	88.5 – 91.5
3-(2-ethylhexyloxy)propane-1,2-diol	70445-33-9 408-080-2 603-168-00-9 01-0000015745-65-0001	Eye Dam. 1; H318 Acute Tox. 4; H332 Aquatic Chronic 3; H412	8.5 – 11.5

For explanation of abbreviations see section 16.

# 4. First Aid Measures

## 4.1 Description of first aid measures

**General advice:** Take off all contaminated clothing immediately.

**If inhaled:** If symptoms persist, call a physician.

**In case of skin contact:** Wash off immediately with plenty of water.

**In case of eye contact:** In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**If swallowed:** Obtain medical attention.

#### 4.2 Most important symptoms and effects, both acute and delayed

**Symptoms:** Risk of serious damage to eyes

**Risks:** No information available.

#### 4.3 Indication of any immediate medical attention and special treatment needed

**Treatment:** No information available.

## 5. Fire Fighting Measures

### 5.1 Extinguishing media

**Suitable extinguishing media:**

Water

Dry powder

Foam

Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media:** No information available.

### 5.2 Special hazards arising from the substance or mixture

**Specific hazards during firefighting:** No information available.

### 5.3 Advice for firefighters

**Further information:** Standard procedure for chemical fires.

## 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Use personal protective equipment.

### 6.2 Environmental precautions

**Environmental precautions:**

Do not flush into surface water or sanitary sewer system.

Avoid subsoil penetration.

### 6.3 Methods and material for containment and cleaning up

**Methods for cleaning up:**

Wipe up with absorbent material (e.g. cloth, fleece).

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

### 6.4 Reference to other sections

See chapter 8 + 13

## 7. Handling and Storage

### 7.1 Precautions for safe handling

**Advice on safe handling:** Handle and open container with care.

**Advice on protection against fire and explosion:** No special protective measures against fire

required.

**Hygiene measures:** Take off all contaminated clothing immediately.

## 7.2 Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers:** Store in original container.

**Further information on storage conditions:**

Keep away from direct sunlight.

Limited stability - see label on pack

Keep container tightly closed.

**Advice on common storage:** Keep away from food and drink.

## 7.3 Specific end use(s)

None.

# 8. Exposure Controls/Personal Protection

## 8.1 Control parameters

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

Substance Name	End Use	Exposure Routes	Potential Health Effects	Value
2-Phenoxyethanol	Workers	Inhalation	Long-term systemic effects, Long term local effects	8.07 mg/m <sup>3</sup>
	Workers	Skin Contact	Long-term systemic effects	34.72 mg/kg
	Consumers	Inhalation	long-term exposure, Short-term exposure, Local effects	2.5 mg/m <sup>3</sup>
	Consumers	Skin Contact	Long-term local effects	20.83 mg/kg
3-(2-ethylhex-yloxy)propane-1,2-dio	Consumers	Ingestion	Short-term exposure, Long-term exposure, Systemic effects	17.43 mg/kg
	Workers	Inhalation	Acute systemic effects	1.55 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term systemic effects	0.875 mg/m <sup>3</sup>
	Workers	Skin Contact	Long-term systemic effects	1 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0.109 mg/m <sup>3</sup>
	Consumers	Skin Contact	Long-term systemic effects	0.5 mg/kg

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

Substance Name	Environmental Compartment	Value
2-Phenoxyethanol	Fresh water	0.943 mg/l
	Marine water	0.0943 mg/l
	Fresh water sediment	7.2366 mg/kg
	Marine sediment	0.7237 mg/kg
	Soil	1.26 mg/kg
	Intermittent use/release	3.44 mg/l
3-(2-ethylhex-yloxy)propane-1,2-dio	Sewage treatment plant	24.8 mg/l
	Fresh water	0.15 mg/l
	Marine water	0.015 mg/l
	Fresh water sediment	0.19 mg/l
	Marine sediment	0.019 mg/l
	Soil	0.894 mg/l
	Sewage treatment plant	5.6 mg/l

## 8.2 Exposure controls

**Personal protective equipment**

**Eye protection:** Safety glasses with side shields conforming to EN166.

**Hand protection:**

Impervious gloves.

**Splash protection:** disposable nitrile rubber gloves e.g. Dermatril (layer thickness: 0.11 mm) made by KCL or gloves from other manufacturers offering the same protection.

**Prolonged contact:** Butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0.70 mm) made by KCL or gloves from other manufacturers offering the same protection.

**Skin and Body Protection:** Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Protective measures:** Avoid contact with skin and eyes.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

**Appearance:** Liquid.

**Colour:** Nearly colourless.

**Odour:** Characteristic.

**Odour Threshold:** Not determined

**pH:** 6 - 8, Concentration: 10 g/l

**Freezing Point:** ca. 5 °C

**Boiling point/boiling range:** > 100 °C

**Flash point:** > 100 °C, Method: ISO 2719

**Evaporation rate:** Not determined.

**Flammability (solid, gas):** Not applicable.

**Upper explosion limit / Upper flammability limit:** Not applicable.

**Lower explosion limit / Lower flammability limit:** Not applicable.

**Vapour pressure:** Not determined.

**Vapour density:** Not determined.

**Relative density:** ca. 1.087 – 1.092 g/ml (20 °C)

**Solubility(ies)**

**Water solubility:** 10 g/l (20 °C)

**Partition coefficient: n-octanol/water:** Not applicable.

**Auto-ignition temperature:** Not applicable.

**Viscosity**

**Viscosity, dynamic:** 28 mPa\*s, Method: Rheo WIN RS 600

**Flow time:** <15 s at 20 °C, Method: DIN 53211

**Explosive properties:** Not explosive.

**Oxidising properties:** The substance or mixture is not classified as oxidising.

### 9.2 Other information

**Surface tension:** 34 mN/m

**Refractive index:** 1.522 – 1.534 at 20 °C

**Self-ignition:** Not applicable.

## 10. Stability and Reactivity

### 10.1 Reactivity

Stable under recommended storage conditions.

### 10.2 Chemical stability

No decomposition if stored normally.

**10.3 Possibility of hazardous reactions**

None reasonably foreseeable.

**10.4 Conditions to avoid**

Protect from frost, heat and sunlight.

**10.5 Incompatible materials**

No data available.

**10.6 Hazardous decomposition products**

None reasonably foreseeable.

## 11. Toxicological Information

**11.1 Information on toxicological effects****Acute toxicity****Components:****2-Phenoxyethanol**

Acute oral toxicity:

LD50 (Rat): 1.850 mg/kg

Assessment: Harmful if swallowed.

Acute inhalation toxicity:

(Rat): Exposure time: 8 h

Remarks: An LC50/ inhalation could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity:

LD50: > 2.000 mg/kg

Remarks: Based on available data, the classification criteria are not met.

**3-(2-ethylhexyloxy)propane-1,2-diol:**

Acute oral toxicity:

LD50 (Rat): > 2.000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

LC50 (Rat): 3,07 mg/l

Method: OECD Test Guideline 403

Assessment: Harmful if inhaled.

Acute dermal toxicity:

LD50 (Rat): > 2.000 mg/kg

Method: OECD Test Guideline 402

Remarks: Based on available data, the classification criteria are not met.

**Skin Corrosion/Irritation****Components****2-Phenoxyethanol:**

Species : Rabbit.

Method: OECD Test Guideline

404

Result: No skin irritation.

**3-(2-ethylhexyloxy)propane-1,2-diol**

Method: OECD Test Guideline 404

Result: Slight irritation.

Remarks: Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation****Components****2-Phenoxyethanol**

Species: Rabbit.

Assessment: Causes serious eye irritation.

Method: OECD Test Guideline 405

**3-(2-ethylhexyloxy)propane-1,2-diol**

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

Test substance: Concentrate.

**Respiratory or skin sensitisation****Components****2-Phenoxyethanol**

Test Type: Maximisation Test.

Species: Guinea pig.

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

**3-(2-ethylhexyloxy)propane-1,2-diol:**

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

**Germ cell Mutagenicity****Components:****2-Phenoxyethanol:**

Germ cell Mutagenicity- Assessment: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

**3-(2-ethylhexyloxy)propane-1,2-diol**

Genotoxicity in vitro:

Method: OECD Test Guideline 471

Result: Not mutagenic in Ames Test

Genotoxicity in vivo:

Method: OECD 474

Remarks: Micronucleus test: not mutagenic.

**Carcinogenicity****Components:****2-Phenoxyethanol:**

Carcinogenicity assessment: No data available

**Reproductive toxicity****Components****2-Phenoxyethanol:**

Reproductive toxicity assessment: Animal testing did not show any effects on fertility.

**3-(2-ethylhexyloxy)propane-1,2-diol:****Effects on foetal development:**

Species: Rat

Application Route: Oral

General Toxicity Maternal: NOAEL: 800 mg/kg body weight

Method: OECD Test Guideline 414

**STOT – Single exposure**

**Components****2-Phenoxyethanol:**

Remarks: Based on available data, the classification criteria are not met.

**STOT - repeated exposure****Components****2-Phenoxyethanol:**

Remarks: No data available.

**Repeated dose toxicity****Components****2-Phenoxyethanol:**

Species: Rat.

NOAEL: 400 mg/kg

Application Route: Oral.

Remarks: Based on available data, the classification criteria are not met.

**3-(2-ethylhexyloxy)propane-1,2-diol:**

Species: Rat.

NOAEL: 100 mg/kg

Application Route: Oral.

Exposure Route: 28-day.

Method: OECD Test Guideline 407

Remarks: Based on available data, the classification criteria are not met.

Species: Rat.

NOAEL: 50 mg/kg

Application Route: Oral.

Exposure Route: 90-day.

**Aspiration toxicity**

No data available.

## 12. Ecological Information

**12.1 Toxicity****Components****2-Phenoxyethanol:**

Toxicity to fish:

LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 : > 500 mg/l

Exposure time: 48 h

Toxicity to algae:

EC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l

Exposure time: 72 h

Toxicity to fish (Chronic toxicity):

NOEC: 23 mg/l

Exposure time: 34 d

Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 9,43 mg/l

Exposure time: 21 d



Species: *Daphnia magna* (Water flea)

### **3-(2-ethylhexyloxy)propane-1,2-diol:**

Toxicity to fish:

LC50 (*Brachidanio rerio*): 60,2 mg/l

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna*): 78,3 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae:

IC50 (*Desmodesmus subspicatus* (green algae)): 48,3 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms:

EC50 : 560 mg/l

Method: OECD 209

Toxicity to fish (Chronic toxicity):

NOEC: 1,5 mg/l

Exposure time: 35 d

Species: *Brachidanio rerio*

Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 20 mg/l

Exposure time: 21 d

Species: *Daphnia magna* (Water flea)

Method: OECD Test Guideline 211

## **12.2 Persistence and degradability**

### **Components:**

#### **2-Phenoxyethanol:**

Biodegradability:

Biodegradation: 90 - 100 %

Exposure time: 15 d

Method: OECD Test Guideline 301A

Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

#### **3-(2-ethylhexyloxy)propane-1,2-diol:**

Biodegradability:

Result: According to OECD criteria, the product is inherently biodegradable.

Method: OECD 302B/ ISO 9888/ EEC 88/302C

## **12.3 Bioaccumulative potential**

### **Components:**

#### **2-Phenoxyethanol:**

Bioaccumulation:

Bioconcentration factor (BCF): 0,35

Remarks: No bioaccumulation is to be expected ( $\log P_{ow} \leq 4$ ).

Partition coefficient: n-octanol/water:  $\log P_{ow}$ : 1.16

#### **3-(2-ethylhexyloxy)propane-1,2-diol:**

Partition coefficient: n-octanol/water:  $\log P_{ow}$ : 2.53

## 12.4 Mobility in soil

### Product:

Mobility: No data available.

### Components:

#### 2-Phenoxyethanol:

Mobility: Remarks: Mobile in soils.

## 12.5 Results of PBT and vPvB assessment

### Product:

Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Other adverse effects

### Product:

Adsorbed organic bound halogens (AOX): Remarks: Product does not contain any organic halogens.

# 13. Disposal Considerations

## 13.1 Waste treatment methods

### Product:

Dispose of as hazardous waste in compliance with local and national regulations.

The product should not be allowed to enter drains, water courses or the soil.

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Waste key for the unused product(Group):** The waste producer itself must, in consultation with the appropriate authorities and a waste disposal company, obtain a waste code from the EWC (European Waste Catalogue).

# 14. Transport Information

## 14.1 UN number

Not regulated as a dangerous good.

## 14.2 UN proper shipping name

Not regulated as a dangerous good.

## 14.3 Transport hazard class(es)

Not regulated as a dangerous good.

## 14.4 Packing group

Not regulated as a dangerous good.

## 14.5 Environmental hazards

Not regulated as a dangerous good.

## 14.6 Special precautions for user

Not applicable.

For personal protection see section 8.

## 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable for product as supplied.

## 15. Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable  
Volatile organic compounds: None, Directive 2010/75/EC on the limitation of emissions of volatile organic compounds.

### 15.2 Chemical safety assessment

Exempt.

## 16. Other Information

### Full text of H-Statements

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H412 Harmful to aquatic life with long lasting effects.

### Full text of other abbreviations

Acute Tox: Acute toxicity  
Aquatic Chronic: Chronic aquatic toxicity  
Eye Dam: Serious eye damage  
Eye Irrit: Eye irritation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu-

lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information:**

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No. 1272/2008

Eye Dam. 1, H318: Calculation Method.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The information contained in this SDS is accurate to the best of our knowledge and has been obtained from a variety of sources. No liability can be accepted arising out of the use, application or processing of this product. It is the users' responsibility to determine the safe conditions for the use of this product.

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